Idaho Department of Health and Welfare

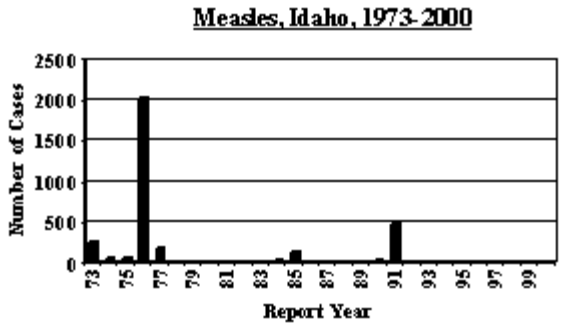
Idaho Disease

Bulletin

Volume 8 Number 1 **Division of Health** **March, 2001**

Measles Scare in Idaho

A recent case of measles in Idaho, and the depiction of a case of measles in the television show "E.R.", has drawn attention to a disease that has become rare in the United States. A 35-year-old traveler returning to Idaho from a trip to Asia developed a rash, fever, cough, and conjunctivitis 2 weeks later. A high-titered measles IgM level was detected. A prompt investigation revealed



that he had been seen in a medical office, visited a medical laboratory for several blood draws, and had also been near co-workers and members of his church during the 3 days prior to rash onset, well within the contagious period. Therefore, press releases and health-alert letters were sent out to notify those possibly exposed. This case prompted the investigation of several suspect cases of measles associated with the various facilities he visited during his contagious period. All of these suspect cases were ruled out for measles by the state public health laboratory.

Although it is possible to acquire measles within the United States, the old adage 'we live in a global community' is never more evident than when infectious diseases are carried home from trips abroad. The measles vaccine is highly efficacious; however, physicians should review the vaccination history of those traveling to a measles-endemic region of the globe. Adequate vaccination of those who travel outside of the United States is a history of two doses of MMR. If vaccination history is unclear, and there is no time to check for immunity, the vaccine can be administered to any person for whom it is not contraindicated. See the Recommendations of the Advisory Committee on Immunization Practices for details (MMWR. May 22, 1998/Vol. 47/No.RR-8). In Idaho, a state with one of the lowest vaccination rates in the country, the potential for vaccine-preventable diseases having an impact on the health of the community is of great

Measles Vaccine:

- First available in 1963
- MMR combination vaccine available in 1971
- Two dose schedule adopted in 1989

INSIDE:

concern. Recently, measles activity in Idaho has appeared only intermittently. Outbreaks in Idaho occurred in 1976-77 and 1991 (see figure on page 1) with sporadic cases occurring in other years.

Several Asian countries, primarily South Korea and Japan, are currently experiencing outbreaks of measles. South Korea is experiencing a massive outbreak. A total of 39,537 cases, including six deaths, have been documented there between March 2000 and January 2001. In January alone, 7449 cases had been reported (World Health Organization report, February 9, 2001).

Korean travel played a role in Washington State recently. The Seattle King County area has reported 12 laboratory-confirmed cases of measles since January, 2001, one of which had a history of travel to South Korea; several others were epidemiologically linked to this traveler.

Measles is one of the most contagious human diseases known. The measles virus is transmitted by large respiratory droplets that survive up to 2 hours in the environment and may be inhaled by someone passing through or by a room that held a measles patient. Measles starts with a prodrome of 10-12 days with a fever +/- 103°F, coughing, coryza, conjunctivitis and Koplik spots. Approximately 14 days post-exposure a maculopapular rash, beginning on the face and head spreading to the trunk, arms, and legs, will occur and last for 5-6 days, fading in the order of appearance. Serious complications occur in a minority of cases, which may include otitis media, diarrhea, pneumonia, and encephalitis. Death occurred 1-2 times per 1000 cases in the United States in recent years; the most common cause of death in children was pneumonia and in adults was encephalitis. Measles is particularly risky for the unborn fetus and may lead to premature labor, spontaneous abortion, or low birth-weight infants.

Measles is diagnosed by a variety of tests: virus isolation from nasopharyngeal swabs or urine, a positive ELISA test for IgM antibodies, or a significant rise in IgG titers in paired sera by a standard serologic assay. IgM is thought to only last for 1-2 months following an infection.

The Centers for Disease Control and Prevention (CDC) publishes the Epidemiology and Prevention of Vaccine-preventable Diseases. The measles chapter can be found at http://www.cdc.gov/nip/publications/pink/meas.pdf.

Meningococcal Disease in Idaho

Idaho had a higher rate of meningococcal disease than the national rate between 1992 and 1996, and matched the national rate of reported cases since then (see figure 1). Meningococcal meningitis is a serious, sometimes (13%) fatal, manifestation of a *Neisseria meningitidis* infection. An additional 11%-19% come away from the illness with permanent hearing loss or other serious sequelae. Although the majority of cases are sporadic, outbreaks of C, B, and Y occasionally occur. Since 1997, there have been slightly more serogroup B than C cases in Idaho in all age groups.

Transmission occurs via respiratory droplets from a nasopharyngel carrier or a case-patient. There is a vaccine that protects against four serogroups of *N. meningitidis* (A, C, Y, and W-135). Protection against serogroup B, also responsible for periodic outbreaks, is not available in the current vaccine. Prior to October, 1999, the vaccine was not routinely used in the United States, but predominantly for international travel to endemic regions of the world or in response to an outbreak. The Centers for Disease Control and Prevention Advisory Committee on Immunization Practices (ACIP) examined studies carried out throughout the

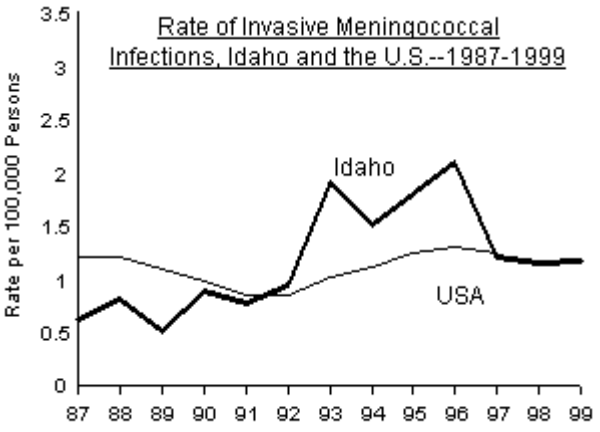


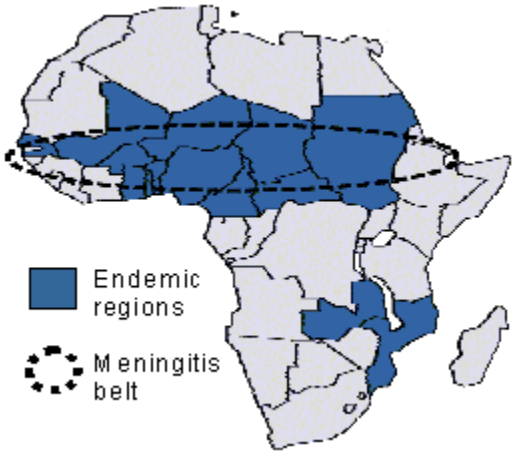
Figure 1:

1990's regarding the risks for acquiring meningococcal disease in college students. They concluded that college freshmen who live in dormitories were at a modestly increased risk of meningococcal disease relative to other persons their age (see figure 2). Based on these findings, the ACIP modified its guidelines for use of the polysaccharide meningococcal vaccine to prevent bacterial meningitis, recommending that those who provide medical care to this group give information to students and their parents about meningococcal disease and the benefits of vaccination prior to entering college.

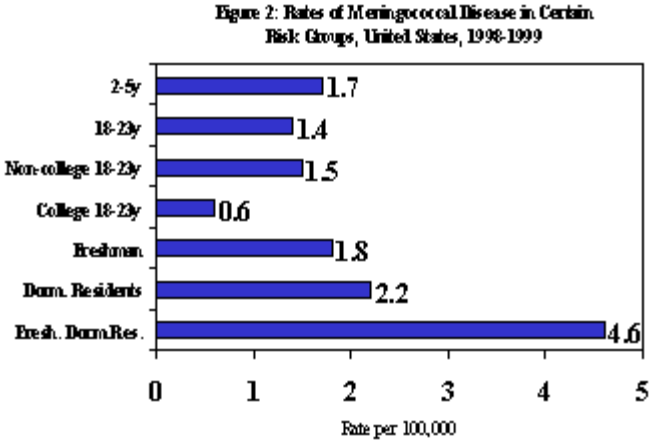
Meningitis cases should be reported to state or local district health departments to assure follow-up of close contacts and to recognize outbreaks.

Some foreign countries experience large, periodic epidemics, particularly in the "meningitis belt" of Africa (see map), therefore, overseas travelers should check to see if the meningococcal vaccine is recommended for their destination. Travelers should receive the vaccine at least 1 week before departure.

Reference: Morbidity and Mortality Weekly Report



(MMWR), June 30, 2000, Vol 49, RR-7. Prevention and Control of Meningococcal Disease and Meningococcal Disease and College Students Recommendations of the Advisory Committee on Immunization Practices (ACIP).



Influenza has not made the splash that it usually does by this time of year in Idaho. Influenza-related deaths in Idaho lag behind prior years during the 2000-2001 flu season, which began Oct 1, 2000. Idaho's experience is similar to what is being seen nationally; the proportion of deaths attributed to pneumonia and influenza are below the epidemic threshold. Influenza is not reportable in Idaho; however, the state and district health departments are interested in hearing of any documented influenza outbreaks in your community, in order to track the severity and subtypes of circulating virus.

The predominant virus detected by the Idaho State Laboratory so far this flu season is influenza A, subtype H1N1. CDC has antigenically characterized 389 influenza viruses received from U.S. laboratories since October 1, 2000. Of the 264 influenza A (H1N1) isolates that have been characterized, 97% were similar to A/New Caledonia/20/99, the H1N1 component of the 2000-01 influenza vaccine. Fewer cases of influenza B have also been detected. Nationwide, it appears that the peak of the flu season was during the third and fourth weeks of January; however, influenza continues to be reported and cultured nationwide.

Therefore, it is not too late to recommend influenza vaccinations in un-immunized high risk individuals.

Influenza Update

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The 15th Laboratory-confirmed case of Hantavirus Pulmonary Syndrome occurred in Idaho in January, 2001, in a 21-year-old male. Although hantaviruses were not recognized in the United States until the highly publicized outbreak in the Four Corners area of the Southwest in 1993, retrospective studies of banked samples revealed that hantaviruses were affecting Idaho residents as early as 1978.

The recent non-fatal case presumably acquired the infection while on duty at the Mountain Home Air Force Base in Mountain Home, Idaho. The case-patient has suffered devastating sequelae from this infection. A thorough environmental assessment did not turn up the definitive source. Past studies have shown that positive rodents exist in the Mountain Home area and in many ecosystems across Idaho.

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For 24-hour disease reporting: 1-800-632-5927

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Idaho's 15th Hantavirus Case